

In The Claims:

The pending claims are listed as follows:

1. (Currently amended) An auto stereoscopic display apparatus comprising:
a spatial light modulator comprising an array of pixels arranged in rows and columns in a pixel plane, the pixels comprising pixel apertures having gaps therebetween with the gaps between the columns of pixels extending substantially parallel to the columns of pixels; and
a spatially multiplexing parallax element capable of directing light from successive columns of pixels towards successive ones of two or more viewing windows in a nominal window plane,
wherein the pixel apertures are arranged to repeat at a pitch substantially equal to a representative width of an intensity profile of an image of a nominal human pupil in the nominal window plane formed in the pixel plane by the spatially multiplexing parallax element, and said representative width is the width between the 5% and 95% cumulative integration points of said intensity profile so that a convolution across two adjacent columns the convolution in a direction perpendicular to the columns varies by at most 5% of the maximum of the convolution,
wherein the convolution is of :
 - (a) the intensity profile of the an-image of thea nominal human pupil in the nominal window plane formed in the pixel plane by the spatially multiplexing parallax element, and
 - (b) the total height of the pixel apertures parallel to the columns of pixels,

~~varies by at most 5% of the maximum of the convolution.~~

2. (Cancelled)

3. (Currently amended) A display apparatus according to claim ~~2~~1, wherein the pixel apertures of pixels of each colour have substantially the same, constant total height parallel to the columns of pixels.

4. (Original) A display apparatus according to claim 3, wherein the pixel apertures of pixels of different colours have substantially the same total height parallel to the columns of pixels.

5. (Currently amended) A display apparatus according to claim ~~2~~1, wherein the pixel apertures of pixels of each colour have substantially the same width perpendicular to the columns.

6. (Original) A display apparatus according to claim 5, wherein the pixel apertures of pixels of different colours have substantially the same width.

7. (Original) A display apparatus according to claim 5, wherein the pixel apertures of pixels of different colours have different widths to compensate for chromatic aberration.

8. (Currently amended) A display apparatus according to claim ~~2~~1, wherein along the rows of pixels, the pixels are arranged in groups consisting of a plurality of adjacent pixels of the same colour.

9. (Original) A display apparatus according to claim 8, wherein the pixels of each group are commonly addressable.

10. (Cancelled)

11. (Original) A display apparatus according to claim 1, wherein the total height of the pixel apertures parallel to the columns of pixels varies.

12. (Currently amended) A display apparatus according to claim 11, wherein the total height of the pixel apertures parallel to the columns of pixels has a profile which increases towards the opposite edges of the same pixel apertures relative to the centre of the pixel apertures.

13. (Original) A display apparatus according to claim 12, wherein the total height of the pixel apertures parallel to the columns of pixels has a profile which has a flat central portion.

14. (Original) A display apparatus according to claim 11, wherein a representative width of said intensity profile is at most 75% of the pitch of the columns.

15. (Original) A display apparatus according to claim 14, wherein said representative width is the width between the 5% and 95% cumulative integration points of said intensity profile.

16. (Currently amended) An autostereoscopic display apparatus comprising: a spatial light modulator comprising an array of pixels arranged in rows and columns in a pixel plane, the pixels comprising pixel apertures having gaps therebetween with the gaps between the columns of pixels extending substantially parallel to the columns of pixels; and a spatially multiplexing parallax element capable of directing light from successive columns of pixels towards successive ones of two or more viewing windows in a nominal window plane,

wherein the pixel apertures repeat at a pitch equal to a representative width of an ~~the~~ intensity profile of an image of a nominal human pupil in the nominal window plane formed in the pixel plane by the spatially multiplexing parallax element, and said representative width is the width between the 5% and 95% cumulative integration points of said intensity profile.

17. (Original) A display apparatus according to claim 16, wherein the pixel apertures of pixels of each colour have substantially the same, constant total height

parallel to the columns of pixels.

18. (Original) A display apparatus according to claim 17, wherein the pixel apertures of pixels of different colours have substantially the same total height parallel to the columns of pixels.

19. (Original) A display apparatus according to claim 16, wherein the pixel apertures of pixels of each colour have substantially the same width perpendicular to the columns.

20. (Original) A display apparatus according to claim 19, wherein the pixel apertures of pixels of different colours have substantially the same width.

21. (Original) A display apparatus according to claim 19, wherein the pixel apertures of pixels of different colours have different widths to compensate for chromatic aberration.

22. (Original) A display apparatus according to claim 16, wherein along the rows of pixels, the pixels are arranged in groups consisting of a plurality of adjacent pixels of the same colour.

23. (Original) A display apparatus according to claim 22, wherein the pixels of each group are commonly addressable.

24. (Cancelled)

25. (Currently amended) An autostereoscopic display apparatus comprising:
a spatial light modulator comprising an array of pixels arranged in rows and columns in a pixel plane, the pixels comprising pixel apertures having gaps therebetween with the gaps between the columns of pixels extending substantially parallel to the columns of pixels; and
a spatially multiplexing parallax element capable of directing light from successive columns of pixels towards successive ones of two or more viewing windows in a nominal window plane,
wherein the total height of the pixel apertures parallel to the columns of pixels varies, and has a profile which increases towards the opposite edges of the same pixel aperture relative to the centre of the pixel aperture.

26. (Cancelled)

27. (Original) A display apparatus according to claim 26, wherein the total height of the pixel apertures parallel to the columns of pixels has a profile which has a flat

central portion.

28. (Original) A display apparatus according to claim 25, wherein a representative width of the intensity profile of an image of a nominal human pupil in the nominal window plane formed in the pixel plane by the spatially multiplexing parallax element is at most 75% of the pitch of the columns.

29. (Original) A display apparatus according to claim 28, wherein said representative width is the width between the 5% and 95% cumulative integration points of said intensity profile.

30. (Original) A display apparatus according to claim 1, wherein the rows and columns are perpendicular to each other.

31. (Original) A display apparatus according to claim 1, wherein the display apparatus is switchable between a first mode in which the spatially multiplexing parallax element is effective to direct light from successive columns of pixels towards an alternate one of two viewing windows and a second mode in which the spatially multiplexing parallax element has no effect.

32. (Original) A display apparatus according to claim 1, wherein the spatially multiplexing parallax element has a structure which is uniform in a direction parallel to

the columns of pixels and which repeats in a direction parallel to the rows of pixels.

33. (Original) A display apparatus according to claim 1, wherein the spatially multiplexing parallax element is a lenticular array.

34. (Original) A display apparatus according to claim 1, wherein the spatially multiplexing parallax element has a structure which repeats at a pitch which is substantially an integer multiple of the pitch of the columns of the array of pixels.

35. (Currently amended) A display apparatus according to claim 1, wherein ~~the a~~ pitch of the windows in the nominal window viewing plane is less than 55 mm.